

# PATENT ABSTRACTS OF JAPAN

(11) Publication number: 2003-050867

(43) Date of publication of application: 21.02.2003

(51) IntCl.

C04F 17/00  
A6B 5/00  
A6B 5/11  
H04Q 7/38

(21) Application number: 2001-240774 (71) Applicant: NIPPON SIGNAL CO LTD:THE

NISSHIN BOSAI KK

OKUMURA JUN

KONO MKIO

(22) Date of filing:

08.08.2001

(72) Inventor: SASAKI SADAO

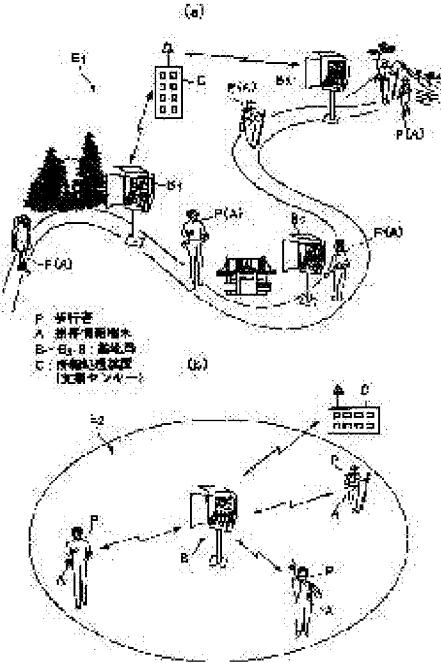
MUKAI SHOJI

## (54) METHOD FOR SUPPORTING HEALTH CHECK OF WALKER OR THE LIKE AND DEVICE THEREFOR

### (57) Abstract

PROBLEM TO BE SOLVED: To provide a method and a device supporting a health check while traveling.

SOLUTION: The method is composed of a step of acquiring data for the health check from a means measuring the health index of a walker or the like by using a portable information terminal, transmitting them together with the identification information of the walker or the like through a base station or from the base station to a supporting center and requesting the health check, a step of judging a health condition the basis of the received data for the health check and the identification information by using an information processor in the supporting center and transmitting reply information including the judged result or the judged result and an advice effective for health management to the base station or through the base station to the portable information terminal, and a step of storing and outputting the received reply information in the base station or the portable information terminal.



\* NOTICES \*

**IPD and INPI are not responsible for any  
damages caused by the use of this translation.**

1. This document has been translated by computer. So the translation may not reflect the original precisely.
  2. \*\*\*\* shows the word which can not be translated.
  3. In the drawings, any words are not translated.
- 

**CLAIMS**

---

[Claim(s)]

[Claim 1] Data for health checks is acquired from a means characterized by comprising the following to measure an index of a pedestrian's etc. health condition using a Personal Digital Assistant, A step which transmits the data for health checks to a support center via a base station with identification information, such as said pedestrian, and requires a health check, and said support center.

Based on identification information, such as said data for health checks received from said base station using an information processor, and said pedestrian, A step which transmits reply information which judges said pedestrian's health condition and includes advice effective in health care, such as the decision result, or the decision result, the pedestrian concerned, to said Personal Digital Assistant via said base station.

A step which memorizes and outputs said received reply information in said Personal Digital Assistant

[Claim 2] Data for health checks is acquired from a means characterized by comprising the following to measure an index of a pedestrian's etc. health condition using a Personal Digital Assistant, A step which records the data for health checks on a recording medium with identification information, such as said pedestrian, and a base station installed in accordance with a prescribed position or a predetermined course.

A step which reads identification information, such as said data for health checks, and said pedestrian, in said recording medium, transmits to a support center, and requires a health check.

In said support center, based on identification information, such as said data for health checks received from said base station using an information processor, and said pedestrian, Said pedestrian's health condition is judged, and said received reply information is remembered to be a step which transmits reply information including advice effective in health care, such as the decision result, or the decision result, the pedestrian concerned, to said base station in said base station, and they are voice response or a step

which carries out a generating picture.

[Claim 3]In [ in a Personal Digital Assistant, whenever it acquires a pedestrian's etc. data for health checks, record the data on a recording medium peculiar to the pedestrian concerned etc. serially, and ] a support center, Health check support methods, such as a pedestrian indicated to claim 1 characterized by judging said pedestrian's health condition based on identification information, such as said data for health checks about the pedestrian concerned etc. who receive recorded serially, and said pedestrian, or 2.

[Claim 4]A value at the time of usual [ of an index of health condition of the pedestrian concerned etc. ] and a normal fluctuation range at the time of movement are beforehand registered into a recording medium, When data for health checks acquired from a means to measure an index of a pedestrian's etc. health condition exceeds said normal fluctuation range, The data for health checks which exceeded, or the data and other data for health checks in the case of the latter, Health check support methods, such as a pedestrian indicated to claims 1 and 2 adding an identification signal to that effect about a thing beyond said normal fluctuation range, and transmitting to a support center via a base station with identification information, such as said pedestrian, or 3.

[Claim 5]A Personal Digital Assistant used for use of health check support methods, such as a pedestrian of claim 1 thru/or 4 given in any 1 paragraph, comprising:

A measurement means for measuring an index in the living body or the index in the living body which shows a pedestrian's etc. health condition, and an external world index which affects it healthily, and inputting the measurement value as data for health checks.

A recording device for recording data for health checks inputted from said measurement means on a portable recording medium with which identification information, such as said pedestrian, is registered.

A means of communication for receiving reply information over said data for health checks from a support center which transmits data for health checks which communication is possible between base stations and is recorded on said recording medium by said recording device to a predetermined base station, and said base station transmits. said received reply information -- a sound -- and/or, an output means for displaying in a picture or a character.

[Claim 6]A base station used for use of health check support methods, such as a pedestrian of 1 thru/or 5 given in any 1 paragraph, comprising:

A means of communication for communicating between Personal Digital Assistants and among support centers.

Recording medium processing for performing reading processing and write-in processing to a recording medium which a pedestrian etc. possess.

A memory measure which memorizes temporarily reply information over said data for health checks received from identification information and said support centers, such as

data for health checks, a pedestrian, etc. who received from said Personal Digital Assistant, or read in said recording medium by said recording medium processing. About identification information, such as data for health checks, a pedestrian, etc. who received from said Personal Digital Assistant, or read in said recording medium by said recording medium processing. Until it receives reply information over this from said support center and transmits to said Personal Digital Assistant, Or a request management tool which performs reception of a health check demand, and management of a reply for every identification information, such as said pedestrian, until it outputs by the after-mentioned output means, said reply information -- a sound -- and/or, a control means which decides to output [ whether to transmit to said Personal Digital Assistant via said means of communication, or ] to said output means according to health check demand origin whose reply information read from an output means outputted by a picture, and said memory measure said request management tool received.

[Claim 7]An information processor used for use of health check support methods, such as a pedestrian of claim 1 thru/or 5 given in any 1 paragraph, comprising:

A means of communication for being prepared for a support center and communicating between predetermined base stations at least

The 1st memory measure for storing temporarily identification information, such as data for health checks, a pedestrian, etc. who received from said base station.

An input means for inputting said healthy decision result or the healthy decision result, and healthy advice.

The 2nd memory measure for storing temporarily said healthy decision result or the healthy decision result, and healthy advice which were inputted from said input means, Identification information read from said 1st memory measure, such as data for health checks and a pedestrian, is displayed on a screen for a healthy judging, And a displaying means for displaying a healthy decision result or the healthy decision result, and healthy advice which were read from said 2nd memory measure on said screen, A control means made to transmit to said predetermined base station by said means of communication by making into reply information said healthy decision result or the healthy decision result, and healthy advice which were memorized by said 2nd memory measure.

[Claim 8]Supporting systems, such as a pedestrian characterized by comprising the following.

(a) A Personal Digital Assistant

A base station.

A measurement means for consisting of information processors, and the (b) aforementioned Personal Digital Assistant measuring an index in the living body or the index in the living body which shows a pedestrian's etc. health condition, and an external world index which affects it healthily, and inputting the measurement value as data for

health checks.

A recording device for recording data for health checks inputted from said measurement means on a portable recording medium with which identification information, such as said pedestrian, is registered, Data for health checks which communication is possible between base stations and is recorded on said recording medium by said recording device is transmitted to a predetermined base station, A means of communication for receiving reply information over said data for health checks from said information processor which said base station transmits, said received reply information -- a sound -- and/or -- having an output means for displaying in a picture or a character -- (c) -- said base station, A means of communication for communicating between said Personal Digital Assistants and between said information processors, Recording medium processing for performing reading processing and write-in processing to a recording medium which a pedestrian etc. possess, A memory measure which memorizes temporarily reply information over said data for health checks received from identification information and said information processors, such as data for health checks, a pedestrian, etc. who received from said Personal Digital Assistant, or read in said recording medium by said recording medium processing, About identification information, such as data for health checks, a pedestrian, etc. who received from said Personal Digital Assistant, or read in said recording medium by said recording medium processing. Until it receives reply information over this from said information processor and transmits to said Personal Digital Assistant, Or a request management tool which performs reception of a health check demand, and management of a reply for every identification information, such as said pedestrian, until it outputs by the after-mentioned output means, said reply information -- a sound -- and/or, reply information read from an output means outputted by a picture, and said memory measure according to health check demand origin which said request management tool received, It has a control means which decides to output [ whether to transmit to said Personal Digital Assistant via said means of communication, or ] to said output means, (d) A means of communication for said information processor being prepared for support centers, such as a pedestrian, and communicating between predetermined base stations at least, The 1st memory measure for storing temporarily identification information, such as data for health checks, a pedestrian, etc. who received from said base station, An input means for inputting said healthy decision result or the healthy decision result, and healthy advice, identification information read from the 2nd memory measure for storing temporarily said healthy decision result or the healthy decision result, and healthy advice which were inputted from said input means, and said 1st memory measure, such as data for health checks and a pedestrian, being displayed on a screen, and for a healthy judging, A displaying means for displaying a healthy decision result or the healthy decision result, and healthy advice which were read from said 2nd memory measure on said screen, A control means made to transmit to said predetermined base station by said means of communication by making into reply information said healthy decision result or the healthy decision result, and healthy

advice which were memorized by said 2nd memory measure.

[Claim 9]In supporting systems, such as the pedestrian according to claim 8, while equipping said Personal Digital Assistant with a positioning device, Based on a pedestrian's etc. operation, it has a means to output emergency dial information which adds position information acquired from said positioning value device to a SOS signal, and the Personal Digital Assistant code concerned, When the means outputs said emergency dial information, transmit to a base station, and this to said information processor. Based on having received said emergency dial information, out of information of a medical institution registered beforehand, form a means to retrieve information of a nearby medical institution of the Personal Digital Assistant concerned, and the search results are made into reply information, Supporting systems, such as a pedestrian characterized by making it transmit to the Personal Digital Assistant concerned via said base station.

[Claim 10]In supporting systems, such as the pedestrian according to claim 8, to said base station based on a pedestrian's etc. operation, It has a means to output emergency dial information which adds position information acquired from said positioning value device, and the base station code concerned to a SOS signal, When the means outputs said emergency dial information, transmit to a support center, and this to said information processor. Supporting systems, such as a pedestrian characterized by forming a search means to retrieve information of a nearby medical institution of the base station concerned, and making it transmit to said base station by making the search results into reply information out of information of a medical institution registered beforehand based on having received said emergency dial information.

---

[Translation done.]

\* NOTICES \*

**JO and INPI are not responsible for any  
damages caused by the use of this translation.**

1. This document has been translated by computer. So the translation may not reflect the original precisely.
2. \*\*\*\* shows the word which can not be translated.
3. In the drawings, any words are not translated.

---

## DETAILED DESCRIPTION

---

### [Detailed Description of the Invention]

[0001]

[Field of the Invention] This invention relates to the method and device which support the health check which those who perform a walking, a hike, a trekking, a jogging, etc. (typically henceforth [in a claim, this is called pedestrian etc. and] a pedestrian) perform themselves during a travel. Especially this invention is suitable to use it for the health check of the pedestrian who travels in accordance with predetermined courses, such as inside of a regional park including the vast muskeg which cannot use a general communication circuit, a forest, etc. or a mountain slope, an alpine club, and the old highway.

[0002]

[Description of the Prior Art] Although performing a walking, a hike, a trekking, a jogging, marathon, or cycling in accordance with a predetermined course with a healthy-oriented upsurge or the increase in middle and old age people is performed briskly, In view of the accident by sudden change of the health condition under travel increasing rapidly, the importance of an occasional health check and the health care has been cried for strongly.

[0003] Therefore, hope that a pedestrian wants to check his health condition here and there [in the middle of a travel] is becoming strong. In order to judge [which continues a travel / or or] whether it stops, that time, Or there is a case where he would like to know the walking distance or the total walking distance and walk time during a point, the walking distance to the following point or the time required, and the weather [in / further / at its present location, a course place, or the destination] (pinpoint weather). And when an emergency measure etc. are required and the symptoms is shown as a result of a health check, it is necessary to get to know the address of a nearby medical institution.

[0004]

[Problem(s) to be Solved by the Invention] Conventionally, there was no effective means by which the pedestrian itself checked his health condition. At most, it is a grade which carries a pedometer during a walk, and does not usually carry out carrying a sphygmomanometer

and a thermometer. Even if it carries a pedometer, a measurement value is only seen on that spot, and the pedestrian cannot check his health condition based on the measurement value of a pedometer, or cannot check exact walking distance (or mileage) or walk time.

[0005]Therefore, when a temper worsens, palpitation and arrhythmia occur or other healthy abnormalities arise during a travel, even if it is carrying the cellular phone whose diffusion rate increased remarkably recently, At the time of healthy abnormalities, a subjective sign is unreliable and usually Information required for diagnosis of a traveler's health condition, or suitable advice to a suitable medical institution, For example, blood pressure, body temperature and exact walking distance or mileage, an address, the weather of the circumference of it, etc. cannot be notified immediately and correctly other than the measurement value of the pedometer at that time. Therefore, the actual condition is being unable to offer support by the effective suitable medical examination and advice to a pedestrian, although the importance of the health check under travel is cried for strongly.

[0006]Even if it is carrying the measuring instrument for checking the health condition of a pedometer, pulsometer, a sphygmomanometer, a thermometer, etc., Since it is necessary to transmit the measurement value recorded on said memorandum paper with the sound having searched the telephone number of the medical institution using the cellular phone, and having telephoned the telephone number after recording on the memorandum paper etc. which have the measurement value with them, It is difficult for there to be a possibility of making the posting mistake of a measurement value, and reading errors or a transfer mistake, and to give information required for the judgment of health condition correctly. Since there is not necessarily a medical institution in the response organization over the demand from such a pedestrian, the pedestrian cannot receive timely and high-quality diagnosis and advice. Even if a cellular phone informs a pedestrian of a diagnostic result, since it is a temporary notice, a pedestrian will recognize the diagnostic result correctly and memorizing will not be easy. It cannot be known [ which needs a certain medical practice ] promptly correctly where even if diagnosed, the medical institution of a its present location nearby in the pedestrian concerned exists. Therefore, a pedestrian does not have few examples on which a travel is continued, holding healthy anxiety, or condition of disease becomes more serious for impossible continuation, and a life is dropped without being aware of having worsened, although its health condition does not need to be worried.

[0007]

[Problem(s) to be Solved by the Invention]Then, when the pedestrian who travels in accordance with the inside of the area where the first technical problem of this invention is large, or a predetermined course wants to check his health condition during a travel, The health check demand information which contains its own data for health checks from a Personal Digital Assistant is transmitted to a predetermined support center, It is in providing the health check support method for a pedestrian which can receive a health check immediately and can receive the reply information which includes healthy advice the healthy decision result and when required. There is the second technical problem of this

invention in providing the device used in order to use the above-mentioned health check support method.

[0008]The third technical problem of this invention besides the reply information which responds for a pedestrian to ask and includes a healthy decision result and healthy advice, When necessary [ urgent ] according to health condition and continuation of a travel has anxiety in medical institution information, it is in providing supporting systems, such as a pedestrian who can provide a pedestrian with travel pertinent information, such as the remaining walking distances, the time required or pinpoint weather information.

[0009]

[Means for Solving the Problem]In order to solve an aforementioned problem, an invention of claim 1, In [ are health check support methods, such as a pedestrian, and ] a Personal Digital Assistant, Acquire data for health checks from a means to measure an index of a pedestrian's health condition, and the data for health checks is transmitted to a support center via a base station with said pedestrian's identification information, In a step which requires a health check, and said support center, said data for health checks received from said base station, and based on said pedestrian's identification information, In a step which transmits reply information which judges said pedestrian's health condition and includes advice effective in health care of the decision result, or the decision result and the pedestrian concerned to said Personal Digital Assistant via said base station, and said Personal Digital Assistant, It is characterized by consisting of a step which memorizes and outputs said received reply information. Therefore, in this invention, the pedestrian can acquire data for health checks by a measurement means in a Personal Digital Assistant, and can transmit that data for health checks to a support center via a predetermined base station with a pedestrian's identification information. In a support center, based on received data for health checks, the pedestrian's health condition is judged and reply information including advice effective in health care, such as the decision result, or the decision result, the pedestrian concerned, is transmitted to said Personal Digital Assistant via said base station. Said Personal Digital Assistant memorizes received reply information. moreover -- being based on operation -- the reply information -- voice response -- or since a generating picture is carried out, the pedestrian can check a healthy decision result and advice.

[0010]In [ similarly inventions of claim 2 are health check support methods, such as a pedestrian, and ] a Personal Digital Assistant, A step which acquires data for health checks from a means to measure an index of a pedestrian's health condition, and records the data for health checks on a recording medium with said pedestrian's identification information, In a base station installed in accordance with a prescribed position or a predetermined course, read identification information of said data for health checks, and said pedestrian in said recording medium, and it transmits to a support center, In a step which requires a health check, and said support center, said data for health checks received from said base station, and based on said pedestrian's identification information, In a step which transmits reply information which judges said pedestrian's health condition and includes advice

effective in health care of the decision result, or the decision result and the pedestrian concerned to said base station, and said base station, It is characterized by memorizing said received reply information and consisting of voice response or a step which carries out a generating picture. Therefore, in this invention, a pedestrian records data for health checks which was measured by a measurement means and acquired in a Personal Digital Assistant on a recording medium, It can be made to be able to read by recording medium processing in which the recording medium was formed in a base station, and identification information of data for health checks and a pedestrian can be transmitted to a support center. In a support center, since reply information which judges the pedestrian's health condition and includes advice effective in health care of the decision result, or the decision result and the pedestrian concerned is transmitted to said base station based on received data for health checks, a base station memorizes received reply information. operation -- the reply information -- voice response -- or since a generating picture is carried out, the pedestrian can check a healthy decision result and healthy advice.

[0011]On the above-mentioned health check support method and in a Personal Digital Assistant, In [ whenever it acquires a pedestrian's data for health checks, record the data on a recording medium peculiar to the pedestrian concerned serially, and ] said support center, It is desirable to judge said pedestrian's health condition based on identification information of said data for health checks about the pedestrian concerned who receives recorded serially, and said pedestrian. When it does in this way, in a support center, a healthy judging can be carried out based on data for health checks serially recorded about a pedestrian, also taking a history of the pedestrian's health condition into consideration.

[0012]In the above-mentioned health check support method, a value at the time of usual [ of an index of health condition of the pedestrian concerned ] and a normal fluctuation range at the time of movement are beforehand registered into a recording medium, When data for health checks acquired from a means to measure a pedestrian's health indicator exceeds said normal fluctuation range, It is desirable to add an identification signal to that effect about that to which said normal fluctuation range was exceeded for the data for health checks which exceeded, or the data and other data for health checks in the case of the latter, and to transmit to a support center via a base station with said pedestrian's identification information. When it does in this way, only data for health checks which exceeded a normal fluctuation range of the pedestrian concerned from a base station, Or an identification signal to that effect is added about what exceeded a fluctuation range normal in the case of the latter for data for health checks and other data for health checks beyond a normal fluctuation range, Since it is transmitted to a support center with said pedestrian's identification information, in a support center. Based on data for health checks and data for health checks of normal values beyond a normal fluctuation range centering [ or ] on data for health checks beyond a normal fluctuation range, a healthy judging can be synthetically performed about the pedestrian concerned.

[0013]An invention of claim 5 is a Personal Digital Assistant used for use of a pedestrian's

health check support method indicated to claims 1 thru/or 4, and an index in the living body or the index in the living body which shows a pedestrian's health condition, and an external world index which affects it healthily are measured, A measurement means for inputting the measurement value as data for health checks, A selecting means for choosing whether which data for health checks is inputted, when two or more said measurement means exist, A recording device for recording data for health checks inputted from said measurement means with said selected selecting means on a portable recording medium with which pedestrian identification information is registered, Health check demand information containing data for health checks which communication is possible between base stations and is recorded on said recording medium by said recording device is transmitted to a predetermined base station, a means of communication for receiving reply information over said health check demand from a support center which said base station transmits, and said received reply information -- a sound -- and/or, it is characterized by having an output means of display \*\*\*\*\* in a picture or a character. In the above-mentioned composition, when chosen by selecting means, a measurement means measures an index in the living body or an index in the living body, and an external world index concerning a pedestrian's health, and inputs data for health checks. A recording device records data for health checks inputted from a measurement means on a portable recording medium. A means of communication receives reply information over said health check demand from a support center which transmits health check demand information containing data for health checks recorded on said recording medium to a predetermined base station, and said base station transmits. An output means outputs received reply information with a sound, and/or displays it on a screen in a picture or a character. That is, if a pedestrian's health indicator is measured in a Personal Digital Assistant and data for health checks is transmitted, it will be transmitted to a support center via a base station, and reply information including a decision result by predetermined healthy judging will be transmitted and displayed on the Personal Digital Assistant through a base station.

[0014]A means of communication for an invention of claim 6 being a base station used for use of a pedestrian's health check support method indicated to claims 1 thru/or 5, and communicating between Personal Digital Assistants and among support centers, Recording medium processing for performing reading processing and write-in processing to a recording medium which a pedestrian possesses, Reply information over said health check demand which received from health check demand information containing data for health checks and pedestrian identification information which were received from said Personal Digital Assistant, or were read in said recording medium by said recording medium processing, and said support center, About a memory measure memorized temporarily and health check demand information which was received from said Personal Digital Assistant, or was read in said recording medium by said recording medium processing. Until it receives reply information over this from said support center and transmits to said Personal Digital Assistant, Or a request management tool which performs

reception of said health check demand, and management of a reply for said every pedestrian identification information until it outputs by the after-mentioned output means, said reply information -- a sound -- and/or, reply information read from an output means outputted by a picture, and said memory measure according to health check demand origin which said request management tool received, It is characterized by having a control means which decides to transmit [ whether to transmit to said Personal Digital Assistant via said means of communication, or ] to said output means.

[0015]A means of communication for an invention of claim 7 being an information processor used for use of health check support methods, such as a pedestrian indicated to claims 1 thru/or 5, being prepared for a support center, and communicating between predetermined base stations at least, The 1st memory measure for storing temporarily identification information, such as data for health checks, a pedestrian, etc. who received from said base station, An input means for inputting said healthy decision result or the healthy decision result, and healthy advice, The 2nd memory measure for storing temporarily said healthy decision result or the healthy decision result, and healthy advice which were inputted from said input means, Identification information read from said 1st memory measure, such as data for health checks and a pedestrian, is displayed on a screen for a healthy judging, And a displaying means for displaying a healthy decision result or the healthy decision result, and healthy advice which were read from said 2nd memory measure on said screen, It is characterized by having a control means made to transmit to said predetermined base station by said means of communication by making into reply information said healthy decision result or the healthy decision result, and healthy advice which were memorized by said 2nd memory measure.

[0016]

[Embodiment of the Invention]Then, an embodiment of the invention is described, referring to drawings. The key map showing two examples of the arrangement pattern with the whole construction of a pedestrian support system for drawing 1 to use this invention method and drawing 2 are the key maps showing the directions for use from which a recording medium differs according to the physical relationship of a Personal Digital Assistant and a base station. The block diagram in which drawing 3 shows the composition of a Personal Digital Assistant roughly, the flow chart with which drawing 4 explains an operation of a Personal Digital Assistant, The mimetic diagram in which drawing 5 shows an example of the display information of a Personal Digital Assistant, the block diagram in which drawing 6 shows the composition of a base station roughly, the flow chart with which drawing 7 explains an operation of a base station, the block diagram in which drawing 8 shows the composition of an information processor roughly, and drawing 9 are the flow charts explaining an operation of an information processor.

[0017][Whole construction of a system] in order to use the health check support method for the pedestrian by this invention, As shown in drawing 1, the pedestrian support system (walking support system) which consists of Personal Digital Assistant A, and the base

station B and the information processor C, and the recording medium D mentioned later are used. As mentioned above, also when this system carries out a hike, a trekking, a jogging, marathon, cycling, etc. other than a walking, it can be used, but below, it explains the case where it uses for a walking (walk) in principle, for the simplification of text expression.

[0018] Each pedestrian P carries Personal Digital Assistant A during a walk. The information processor C is prepared for the pedestrian support center which fulfills the advantageous site condition for the healthy judging which is a main function of a pedestrian support system, healthy advice creation and offer, collection of medical institution information or travel pertinent information, and offer. When installed in the remote place of a support center, and the area which cannot use a general communication circuit in principle, the advantage of this invention is demonstrated effectively, but the base station B may be installed in the area which can use a general communication circuit. And a course like an arrangement pattern for example, in which the base station B is illustrated to drawing 1 (a) and in which distance which can be electric wave reached, such as a path through a wood and a mountain trail, is comparatively short. Or in the natural environment E 1 which can perform a walking, a hike, etc. along with long-distance courses which continue not less than 10 km, such as the old highway and a pilgrimage way. The base station B1 - B3 -- are arranged at two or more places, i.e., the position which suits communication with the interval which can communicate also with Personal Digital Assistant A of the pedestrian P of which point. On the other hand, like the arrangement pattern illustrated to drawing 1 (b) in for example, a broader-based forest park etc. The maximum distance from the center should just establish the one base station B in the center of the field, etc. in the natural environment E 2 which can perform a walking, a hike, a jogging, etc. within limits to which the discharge electric wave from one base station of about 10 km or less can reach the pedestrian P of which point.

[0019] Below, each of Personal Digital Assistant A which is the above-mentioned component, the base station B, the information processor C, and the recording medium D is explained in detail. [Personal Digital Assistant] The control section 10 which consists of CPUs (central processing unit) as Personal Digital Assistant A is shown in drawing 3, The storage parts store 11 connected to the control section 10 via the bus, and the input part 12 connected to the control section 10 via the interface, respectively. With the card processing part 13, the outputting part 14, the control panel 15 connected to the control section 10 via the bus, and the Radio Communications Department 16, although not illustrated, it has a power supply as a matter of course. The GPS (Global Positioning System) positioning device 17 for detecting the omnidirection position of a Personal Digital Assistant may be connected to the control section 10.

[0020] Since Personal Digital Assistant A is possessed by the pedestrian, a dry cell or a battery is used for a power supply. The battery is rational in their being the thing which connected the pendulum type battery charger or solar cell which operates by walk vibration

and is charged, or a hybrid.

[0021]The pedometer 12a is always connected to the input part 12. This pedometer operates by a pedestrian's walk vibration, measures the number of steps, always displays it so that visual recognition is possible, until it is reset, and also it outputs the electrical signal which shows that measurement value. The pedometer can give capable information to the check of a pedestrian's health condition by what step to have traveled known distance. The blood pressure, the pulse which are the indices of a pedestrian's health condition at the input part 12, It is what inputs the measurement value into the control section 10 from the measuring instrument which measures body temperature (these may be hereafter called index in the living body.) etc., The in-the-living-body index measuring instrument 12b which may output a measurement value with an electrical signal, for example, a sphygmomanometer, the pulsometer 12c, the thermometer 12d, etc. are electrically connected to the input part 12 via the terminal in which multiple connection or shift connection is possible.

[0022]In order to incorporate the time at the time of measurement of the above-mentioned health indicator, the clock 12e is formed in the input part 12, and the timer 12f is formed in it still more preferably. If the target walk time of unit distance is decided, this timer 12f will calculate the walk pitch (second) for walking that unit distance by target walk time, will output it for every pitch of that, and will generate a pace sound with that output. Therefore, if a pedestrian sets up and places the walk pitch which suits its health condition and turns on a start switch at the time of a travel start, he can generate the walk pitch and the pace sound which aligned. And since the walk pitch can become one index in the case of a health check (judgment material), the input of the preset value of a walk pitch is enabled from the input part 12.

[0023]When a pedestrian travels the flat ground which is not high as for altitude, The measuring instrument with which a Personal Digital Assistant is equipped The above-mentioned pedometer 12a, the in-the-living-body index measuring instruments 12b-12d, Although the timer 12f etc. may be used, when you travel atmospheric pressure, high outside air temperature and humidity, highlands, a mountain range of a possibility of affecting it healthily where which advanced change is large, etc., External world index measuring instruments, such as the manometer 12g, the thermometer 12h, the hygrometer 12i, and the altimeter 12j, may be added to the Personal Digital Assistant Since it becomes saving of electric power to make it operate only when the start switch (graphic display abbreviation) provided corresponding to the measuring instrument concerned is turned on on the occasion of a health check, measuring instruments other than pedometer 12a have it [ preferred ]

[0024]The card processing part 13 is for being equivalent to recording medium processing, reading to the card D mentioned later, and carrying out write-in processing. This card processing part 13 can incorporate the measurement value by the measuring instrument specified in the control panel 15 mentioned later from the input part 12 as data for health

checks, and can record it on the card D with the code which shows the kind of measured index of that measuring instrument. The data for health checks currently recorded on the card can be read by the demand from the control panel 15. When a card slot is provided in the card processing part 13 and a Personal Digital Assistant is possessed, it is preferred to prevent lapse of memory of a card cellular phone of a pedestrian before a travel start, as it is in sight whether the card is inserted in the card slot.

[0025] Recording medium] An IC card or a memory card (only henceforth a card) of a predetermined contact process or a noncontact type, etc. can be used for the recording medium D. An IC card has the well-known composition of CPU, a memory, an input part, an outputting part, etc., and when that card D applies for use of this pedestrian support system to a walking support club (pedestrian supporting group), it is beforehand distributed to a club member, for example. The identification information of the user of a pedestrian support system (ID), for example, the membership number of a walking support club, etc., is registered into the card D. When using the card with which only ID was registered, in order to raise the accuracy of the healthy judging in the information processor C, it is effective to register each member's address, a name, age, sex, a chronic disease, a previous illness, etc. corresponding to each ID into the information processor C of a support center. However, when the number of users of this pedestrian support system increases, there is a difficulty that the burden of the storage capacity in the information processor C and the processing load of a computer become large. In order to cancel such a difficulty, it is desirable to register additional information, such as an address, a name, age, sex, a chronic disease, and a previous illness, into each user's card in addition to the ID. in the following -- ID -- a term includes this additional information.

[0026] It is desirable to set up and register the value and the usually normal fluctuation range at the time of movement at the time of usual into the card D about each of the index of the pedestrian concerned in the living body further. The normal value of this health indicator, and the preset value (henceforth an information set) of a normal fluctuation range, Only when the card holder's health indicator is measured and the measurement value crosses said normal fluctuation range, shortening of the time which shortening of hour corresponding and a healthy judging take can be aimed at by transmitting the data for health checks to a support center. When the card holder transmits the data for health checks at the time to a support center from a Personal Digital Assistant and receives a health check during a travel so that it may be mentioned later, If the normal value of a health indicator and a normal fluctuation range, i.e., an information set, are known, a healthy judging can be performed more easily and correctly.

[0027] If the predetermined card D is not used, this pedestrian support system cannot be used. When using the IC card with a clearing function which has spread through the card D in dealings society, i.e., the card with which information required for dealings settlement of accounts is recorded, While being able to receive a health check and an offer of information using a pedestrian support system, When it is charged by the accounting

device prepared for a support center so that it may be mentioned later, there is an advantage which can perform the accounting and settlement processing about this system user simple like the time of the goods in everyday life or service purchase.

[0028]The nonvolatile memory (R O M) 11a in which the storage parts store 11 stores the system program which controls the basic motion of a Personal Digital Assistant, The buffer 11b for an input for storing temporarily until it ends record on the card D according the measurement value inputted from each above-mentioned measuring instrument to the card processing part 13, The buffer 11c for transmission for storing temporarily, before transmitting the contents read in the card D by the card processing part 13 to a base station, It has the buffer 11e for an output for storing temporarily, before outputting the buffer 11d for reception for storing temporarily the reply information received from the information processor C of a support center via the base station B, and the selected thing in said reply information to the outputting part 14. Each buffer comprises R A M.

[0029]The outputting part 14 displays the functional menu of this terminal on the time of powering on of Personal Digital Assistant A, or, It is what displays the request item to a support center, or displays the act for which a user is asked according to item selection, It has the sound signal output part 14a which changes into an audio signal the reply information received via the base station from the information processor C, and is outputted to the loudspeaker 14b, and the picture signal output part 14c which is changed into a character, a number, numerals, a picture, etc. and is outputted to 14 d of display screens, such as LCD (liquid crystal display).

[0030]The control panel 15 is for comprising switches, such as a touch panel or a button with a cursor function, and carrying out selected designation of the request item out of the menu display screen 14d of the outputting part 14. Said control panel may be constituted so that operation can be done simply correctly, the portion corresponding to the request item name in the menu displayed on 14 d of display screens of the outputting part 14 may be touched, or cursor may be moved and a determination button may be pushed.

[0031]The wireless radios 16 can communicate between this Personal Digital Assistant A and base station B, and any of the type only for this system and the combination type which can also use a general communication circuit may be sufficient as them. An I mode portable telephone is built into Personal Digital Assistant A, in a combination type case, the receiving contents at the time of I mode communication can be outputted to said LCD 14d, and it can display them.

[0032]An operation of Personal Digital Assistant A which has the composition mentioned above is explained referring to drawing 4. First, a pedestrian supplies a power supply to a Personal Digital Assistant just before a travel start, and starts this Personal Digital Assistant, and its own card is inserted in the card slot of the card processing part 13 (in Step 11, it is Y.). Hereafter, a step is called S.. The menu showing the request item which can be required of a support center from a Personal Digital Assistant is displayed on the display screen of the outputting part 14 following this (S12). After starting, although not

shown in drawing 4, the timer 12f outputs a walk pitch sound. Therefore, the pedestrian can start a travel, can keep pace with the walk pitch sound, and can do a walking or a jogging. The pedometer 12a starts measurement with the start of this travel.

[0033]As a primary menu, a "health check" and three request items with a "offer of information" are displayed to be "[ urgent(SOS) ]" on the menu expressed to a display screen as illustrated by drawing 5 (a). When health condition gets worse rapidly during a travel or it has an accident, a graphic display is omitted by drawing 4, but If the control panel 15 is operated and it chooses "it being urgent(SOS)", while position information will be incorporated from the positioning device 17 and the buffer 11c for transmission will memorize first, the Personal Digital Assistant code concerned is memorized from the nonvolatile memory 11a by the buffer 11c for transmission. And this pedestrian adds the SOS signal meaning being in a state of emergency to be rescued to a terminal code and position information, and transmits to them from the wireless radios 16 by making this into emergency dial information. Via the base station B, it is received by the information processor C of a support center, and this emergency dial information is used for the correspondence of relief activities in which others are [ being a request and ] suitable in a support center. When it chooses "it being urgent(SOS)", even if it does not apply the time and effort of the operation which chooses the request item of the "offer of information" mentioned later and a "medical institution" in this order, At the same time emergency dial information is transmitted, shortly after choosing "it being urgent(SOS)", It can also constitute so that a medical-institution-information request code, i.e., the information which requires offer of the information (medical institution information) which it shows to the whereabouts of the nearby medical institution the pedestrian's present location, may be transmitted to a support center.

[0034]On the other hand, during the usual travel, when there is no consciousness of healthy abnormalities, it is an intermediate rest station etc., and when aware of healthy abnormalities, it can stop at arbitrary places, and the control panel 15 can be operated, and a "health check" can be chosen from the request items in the menu of 14 d of display screens. After carrying out the front stirrup which chooses a "health check" (S13), to the input part 12 A health indicator measuring instrument, For example, the sphygmomanometer 12b, the pulsometer 12c, and the thermometer 12d are connected in parallel, the control panel 15 is operated, looking at the secondary menu indication (drawing 5 (b)) of 14 d of display screens, and other indices of the number of steps, for example, indices, such as blood pressure, a pulse, and body temperature, are specified. Based on this specification, the control section 10 incorporates that measurement value from the pedometer 12a and the other specified measuring instrument as data for health checks, and memorizes it to the buffer 11b for an input (S14). If the index which the measuring instrument measures by the control panel 15 whenever it connects a measuring instrument is specified when the input part 12 is possible for shift connection of a measuring instrument, the measurement value is incorporated and the buffer 11b for an

input can memorize.

[0035]In this way, as data for health checks, the measurement value inputted from each measuring instrument in Personal Digital Assistant A is recorded on the card D by the card processing part 13 while it is memorized by the storage parts store 11 (S15). After being transported to the buffer 11e for an output, the measurement value memorized by the storage parts store 11 can also be constituted so that it may be displayed on 14 d of display screens. After recording on a card, the control section 10 waits to input directions of a transmission start from the control panel 15 (S16). If transmission instruction is inputted, ID, an information set, and the data for health checks are read in a card by the card processing part 13, and it stores temporarily at the buffer 11c for transmission. To the request item specified previously, to the offer-of-information request code currently assigned beforehand And these data, What added the identifier (code) of the Personal Digital Assistant concerned read from nonvolatile memory ROM is transmitted from the wireless radios 16 as health check demand information (S17). After transmitting, it waits to receive the reply information which makes healthy advice with the contents the healthy judging or healthy decision result to the health check demand which transmitted now via the base station B from the information processor C of a support center mentioned later (S18).

[0036]When reply information is received from the base station B, this is stored temporarily at the buffer 11d for reception, and it indicates that it received reply information in 14 d of display screens (S19). Reply information is transported to the buffer 11e for an output for the preparation displayed on 14 d of display screens (S110).

[0037]Then, according to the selection in the control panel 15 (S111), reply information is read from the buffer 11e for an output. From the loudspeaker 14b, a healthy decision result or a healthy decision result, and healthy advice are reported by the sound via the sound signal output part 14a, Or via the picture signal output part 14c, a healthy decision result and healthy advice use a character, a sign, a number, etc. for 14 d of display screens, and are displayed on them (S112).

[0038]When the pedestrian who received the healthy decision result received from a support center from Personal Digital Assistant A wants to receive offer of the information (medical institution information) which it shows to the whereabouts of the nearby medical institution of a its present location, If the control panel 15 is operated and the request item "offer of information" of the primary menu of 14 d of display screens of Personal Digital Assistant A is chosen, the kind of information on "medical institution information", "travel pertinent information", etc. which can be provided will be displayed, and it will become selectable about one of them so that it may illustrate to drawing 5 (b). And selection will send the information service request information which has a request item code which specifies the kind of information to a support center. Therefore, for example, selection of "medical institution information" will transmit the information service request information which requires offer of the information about a nearby medical institution to the information

processor C via the base station B from the Personal Digital Assistant

[0039]In order that a pedestrian may decide whether to continue a travel or not in consideration of the present health condition, The walking distance and the time required to the surrounding pinpoint weather information of a present location or a target place, and the following point of a travel course, Or when asking for offer of the guidance guide data (these are called travel pertinent information on these specifications.) of a course, etc., In the primary menu of 14 d of display screens of Personal Digital Assistant A, a "offer of information", By choosing "travel pertinent information" in a secondary menu, respectively, and choosing what corresponds in the Miyoshi menu (drawing 5 (c)) displayed after that out of a request item "weather information", "next point", and "guidance derivation", A support center can be asked for offer of desired information, respectively. The code of the request item which specified it as the pedestrian's ID in any case, and the code of the Personal Digital Assistant concerned are transmitted.

[0040][Base station] Next, the base station B has Personal Digital Assistant A, a function as a translator between the information processors C, and the function as an information providing device to provide the reply information from a support center to the card holder when the card D is inserted in a base station. And the control section 20 from which the base station B was constituted by CPU which manages a power supply (graphic display abbreviation) and the whole as shown in drawing 6, The storage parts store 21 connected to this control section by bus, respectively, and the card processing part 23, It has the 2nd transmitter 26b for carrying out the bidirectional radio or wire communication between the outputting part 24, the control panel 25, the 1st transmitter 26a for carrying out radio between Personal Digital Assistants A, and the information processor C.

[0041]As the base station B was mentioned above, it is installed in a place impossible [ use of commercial power, such as mountains and the old highway, ], or difficult, or the place which is not easy to go for maintenance inspection between a mountain and a wood in many cases. Therefore, when installed in such a place, a battery and a solar cell are used for a power supply.

[0042]The nonvolatile memory (R O M) 21a in which the storage parts store 21 stores the system program which controls the basic motion of a base station, The buffer 21b for the 1st reception for memorizing the terminal code received from Personal Digital Assistant A, ID and the data for health checks, or an offer-of-information request code, The buffer 21c for the 1st transmission for storing temporarily what added the identification code of the base station concerned in preparation for transmission to the information processor C by the contents memorized to the buffer 21a for the 1st reception, The buffer 21d for the 2nd reception for storing temporarily the reply information (ID and a healthy decision result, healthy advice, medical institution information, travel pertinent information, and others are included.) received from the information processor C, The buffer 21e for the 2nd transmission for storing temporarily the contents memorized to the buffer 21d for the 2nd reception in preparation for transmission to a predetermined Personal Digital Assistant, It

comprises the buffer 21f for an output for storing temporarily the contents memorized to the buffer 21d for the 2nd reception in preparation for the output to the outputting part 24 of the base station concerned.

[0043]The card processing part 23 is the card processing part 13 and identical configuration in a Personal Digital Assistant, and carries out the same operation. Any of a card contact process or a noncontact type may be sufficient also as this card processing part. To a base station being installed in the middle of a travel course, a pedestrian holds a card and moves here and there. Therefore, since a possibility of forgetting card recovery is also after becoming absorbed in information acquisition in a base station when it is made the gestalt which inserts a card in a card slot, the card processing part of a base station has an ending desirable noncontact type which is not separated from the body only by a pedestrian approaching a card.

[0044]The outputting part 24 is the outputting part 14 and identical configuration in Personal Digital Assistant A fundamentally. Therefore, also in a base station, by making the card D read by a card processing part, the pedestrian can transmit the data of a card to the information processor C, can receive reply information, and can receive reply information by voice response or image display.

[0045]By operating the control panel 25, looking at the menu displayed on 24 d of display screens also in the base station B, About "either "the same request item as the case in a Personal Digital Assistant, i.e., "[ urgent (SOS) ]" and a "health check", and an offer of information", and an offer of information." Travel either "medical institution information" or "pertinent information" can be chosen, and an emergency dial, a health check, or an offer of information can be required now of a support center.

[0046]The request management tool which manages about the health check demand or information service request from a pedestrian is provided in the base station B. Namely, the request Management Department 20a established in the control section 20, Based on the health check demand or information service request inputted from the health check demand which receives from a Personal Digital Assistant, an information service request, or a base station, A request management file is created for every ID, and the request reception record to the file and a requesting agency perform a Personal Digital Assistant, that request former record which is either of the base stations, and reply record at the time of receiving reply information from the support center to the request And when a requesting agency is a Personal Digital Assistant about the reply information received from the support center, The reply information memorized by the buffer 21d for the 2nd reception is transported to the buffer 21e for the 2nd transmission, and it transmits to the Personal Digital Assistant applied to the terminal code concerned with the 1st transmitter 26a. When a requesting agency is a local station, transport reply information to the buffer 21f for an output from the buffer 21d for the 2nd reception, and predetermined reply information is read from the buffer 21f for an output based on the specification from the control panel 25, Voice response or image display is performed to the outputting part 24.

[0047]Then, the operation by the above-mentioned composition of the base station B is explained based on drawing 7. If the base station B is made to switch on and start a power supply, first, as initial motion, the control section 20 will clear a request management file, and will also clear the display screen of the outputting part 24. And it is investigated whether the health check demand or the information service request is received from one of Personal Digital Assistants A (S 21). When not having received from a Personal Digital Assistant in a local station, it is investigated whether the health check demand or the information service request was inputted after the card insertion to the card processing part 23 (S 22). When a demand is received from Personal Digital Assistant A, the Personal Digital Assistant code contained in the receiving contents, ID, and the data for health checks or an offer-of-information request code is memorized to the buffer 21b for the 1st reception (S 23). Next, those data is stored in the request management file about the ID, a request reception flag bit is set to 1, and reception record is carried out (S 24). When a demand is inputted from the card processing part 23 (it is Y in S 22), After memorizing to the buffer 21b for the 1st reception similarly, replace with a request management file at said Personal Digital Assistant code, and the base station code concerned is stored, and also. Like the time of reception of the demand from a Personal Digital Assistant, ID, the data for health checks, or an offer-of-information request code is registered, and reception record is carried out (S 24).

[0048]Following on reception record, the control section 20 to the 2nd transmitter 26b a Personal Digital Assistant code, ID, the data for health checks or an offer-of-information request code, and (the case of the demand from a Personal Digital Assistant), Or base station code ID, the data for health checks or an offer-of-information request code, and (the case of the demand from a base station) are transmitted to the information processor C of a support center via the 2nd transmitter 26b (S 26).

[0049]After the transmission, the base station B stands by reception of the reply information from the information processor C (S 27). When it receives, the receiving contents are stored temporarily at the buffer 21d for the 2nd reception (S 28). The request management about the ID is ended by setting the request reception flag bit of the request management file corresponding to this to 0, and carrying out reply record based on ID and Personal Digital Assistant code, or base station code contained in reply information (S 29). Then, it is judged any of a Personal Digital Assistant code and a base station code while reading the received reply information from the buffer 21d for the 2nd reception and transmitting to the buffer 21f for an output, the codes contained in the reply information are (S 210). When it is a Personal Digital Assistant code, according to the code, the reply information read from the buffer 21f for an output is transmitted to the Personal Digital Assistant concerned from the 1st transmitter 26a (S 211). When the code contained in the received reply information is a base station code, Based on operation of the control panel 25 of the base station, the reply information specified from the buffer 21f for an output can be read, and voice response can be carried out from the loudspeaker of the outputting part

24, or image display can be carried out to a display screen (S 212).

[0050][Adjustment of a base station and an information processor] The requirement signal may be received in one of nearby base stations, and a pedestrian may be received in two or more base stations, when carrying out a health check demand or an information service request with Personal Digital Assistant A. After advancing a health check demand or an information service request to the information processor C via the one base station B, wishing to receive reply information in other base stations is also considered. About the same ID, in order to meet such a request, when a demand is received from two or more base stations, the information processor C transmits reply information to each base station by two-way communication between base stations, ends request management of each base station, and is aiming at mitigation of the management burden.

[0051][Information processor] the information processor C of a support center. The control section 30 which manages control of each part as shown in drawing 8 and which comprises a CPU, It has the input part 32 connected with the storage parts store 31 connected to the control section 30 via the bus, and the external storage 31E via the interface at the control section 30, respectively, the outputting part 34, the control panel 35, and the transmitter 36. The transmitter 36 is bidirectional radio or a thing for carrying out a wire communication between each base station B.

[0052]The nonvolatile memory (R O M) 31a in which the storage parts store 31 stored the system program which specifies the basic motion of the information processor C, The buffer 31b for reception which stores temporarily a Personal Digital Assistant code, the data for health checks, an offer-of-information request code, and a base station code for the contents received from each base station for every ID, When the reply information over one health check demand or an information service request is acquired, it has the buffer 31c for transmission stored temporarily before transmitting to a predetermined base station, and 31 d of output buffers for outputting receiving contents or the entry content by the input part 32 to the outputting part 34.

[0053]The sound signal output part the outputting part 34 had the graphic display omitted, the loudspeaker connected to this, etc. Comprise the displays 34d, such as CRT or LCD, and to the display screen. It displays visually inspectable so that a healthy judging can do a pedestrian's characteristic data based on ID which received from a certain base station, the index corresponding to the data for health checks, the request item corresponding to a request item code, etc., seeing this.

[0054]The input part 32 is for inputting the decision result obtained when a medical practitioner and those who have a know how about other healthy judgments do a healthy judging based on the data for health checks received from a certain base station. Therefore, the input part 32 comprises a keyboard, a mouse, etc. which were maintained ahead of the display screen of the outputting part 34 etc.

[0055]Based on an index when [ normal ] it reads in a card and is sent, and the data and the measurement value of a normal fluctuation range, a computer may be able to perform

a healthy judging. Therefore, a healthy judging computer will constitute a part of input part 32 in that case.

[0056]The control panel 35 comprises 34 d of display screens and the mouse of the outputting part 34, and is chosen from the items displayed on the menu screen, When the data corresponding to the selected item stored in the buffer 31b for reception can be read, and it can be made to display on a display screen and a health check demand is received, it can also specify which [ of the contents of record of the card connected to the Personal Digital Assistant or the base station ] is read.

[0057]The request management tool which performs reception record and reply record for every ID is established about the health check demand or information service request received via the base station B to the information processor C. That is, the request Management Department 30a established in the control section 30 is the same as that of the request management tool in the base station B. To the control section 30, create the health check demand or information service request received from the base station B for every ID, and a request management file Namely, the request reception record to the file, When record of only the Personal Digital Assistant code of a requesting agency, the base station code which is translators, or the base station code of a requesting agency, and the reply information from the support center to the request are transmitted, reply record is performed, respectively. And the reply information memorized by the buffer 31c for transmission is transmitted to a predetermined base station after reply record according to the base station code concerned with the transmitter 36.

[0058]In the information processor C, request management It is continued until it receives the terminate signal of pedestrian support system use about the ID concerned from Personal Digital Assistant A unlike the case of the base station B (i.e., until a pedestrian ends a travel course for example), and it is made to be accumulated in request management information at the external storage 31e just before an end. Thus, since request management information is accumulated until a pedestrian ends a travel, the pedestrian can receive reply information from any base station, when a health check demand is advanced via two or more base stations which met the course.

[0059]In the information processor C, about ID made requiring special attention [ a healthy decision result ]. It may be made to save the period when the data is effective, for example, a seven-day grade, for the healthy medical examination of a pedestrian's after that made requiring special attention [ after the end of use of a pedestrian support system ] in the healthy advice the data for health checks, a healthy decision result, and at the time of being created, or a cause inquiry. The external storage 31E fits memory of such a lot of [ comparatively / a long period of time ] request management information. When a SOS signal is received from Personal Digital Assistant A or the base station B, the request management information corresponding to the ID may also be constituted so that fixed time preservation may be carried out It is because the request management information in this case may serve as an aid of that progress and investigation of a cause when a SOS

signal addresser encounters a misfortune.

[0060]The accounting device 40 charged based on transaction accounts read in said card D, such as ID and a credit card number, is electrically further connected to the control section 30 to the person using this pedestrian support system. The control section 30 gives the transaction account and fee collection command signals corresponding to the pedestrian's ID, such as a credit card number, after receiving ID via a base station, whenever it provides healthy determination information, medical institution information, or travel pertinent information to the pedestrian to the accounting device 40. The accounting device 40 is a known thing, performs processing which charges the utilization charge of prescribed amount of money to a credit card number etc. whenever it can give a fee collection command signal from the control section 30, and transmits to a predetermined settlement financial institution via the communication line which is not having the accounting information illustrated.

[0061]An operation of the information processor C by the above-mentioned composition is explained based on drawing 9. If a power supply is switched on and started by the information processor, the transmitter 36 will stand by reception of the demand information from one of base stations (S 31). If a requirement signal is received from one of the base stations B, the receiving contents are stored temporarily at the buffer 31 b for reception (S 32). Next, the control section 30 creates the request management file for every ID based on ID contained in the receiving contents, ID, a Personal Digital Assistant code or a base station code, the data for health checks, or a request item code is stored in the file, and request management is started about the ID (S 33). That is, it means carrying out request reception record with storing of a health check demand or an information service request. Then, the control section 30 analyzes the received demand (S 34). That is, based on the data stored in the request management file, the demand requires [ emergency dial and health check ], or judges an information service request (S 35, 36).

[0062]Since it mentioned above, it is omitted by drawing 9 that display the position information on the Personal Digital Assistant contained in the emergency dial information or a base station on a display screen when it is an emergency dial, or urgent correspondence processing of collection, transmission, etc. of nearby medical institution information is performed. When it is a health check demand, it shifts to S 38, ID, a Personal Digital Assistant code or a base station code, and the data for health checks are transported to the buffer 31 d for an output, and this is displayed on the display screen of the outputting part 34. Therefore, those who have a medical practitioner or a know how of a healthy judging can judge the health condition of the pedestrian of the ID based on the displayed data for health checks (S 39). The healthy decision result can be inputted from the input part 32 (S 310). The healthy advice which should be given to the pedestrian concerned depending on the result of a healthy judging can be inputted from the input part 32, and reply information can be created (S 310).

[0063]It is not limited to performing the healthy judging using the data for health checks

within the information processor C. A healthy judging can also be externally performed by adding the function which transmits the data for health checks to the terminal in which the medical practitioner of judgment after consignment is doing management employment at the control section 30 of the information processor C, and the function to receive the reply information inputted into the terminal.

[0064]When Personal Digital Assistant A can input the measurement value of an external world index measuring instrument, According to the pedestrian's ambient environment, atmospheric pressure, outside air temperature, humidity, and every advanced external world index can be transmitted to a support center with indices in the living body, such as the number of steps, blood pressure, a pulse, and body temperature, and the center can also be asked for the healthy judging from a large standpoint

[0065]If it is ordered transmission by operation of the control panel 35 when creation and the input of reply information are completed, the reply information will be memorized by the buffer 31c for transmission (S 311), and will be successingly transmitted to the base station B which is a requesting agency by the transmitter 36 (S 312). The base station of this transmission destination is determined according to the base station code with which the request management file was memorized. After ending transmission, reply record is carried out and request management is performed (S 313). When the base station code and the Personal Digital Assistant code are memorized by the request management file, after being transmitted to a base station, it is as having mentioned already to be transmitted to a predetermined Personal Digital Assistant according to said Personal Digital Assistant code from the base station.

[0066]If reply information is transmitted, based on transmission of reply information, the accounting device 37 connected to the control section 30 will perform accounting to ID, and will transmit accounting information to a predetermined settlement financial institution. When using an IC card with a clearing function for the card D in a Personal Digital Assistant or a base station, the accounting device 37 performs predetermined processing based on the transaction account number read in the IC card. When reply record is carried out to a request management file in S 313, it means that the support for one health check demand was completed.

[0067]In S 34, when it is an information service request as a result of the analysis of the demand which the information processor C received (it is Y in S 36), the information processor C performs collection of the specified information, edit, and other required processings based on the request code (37).

[0068]For example, when the request code assigned to "medical institution information" is contained in the information service request, Out of what is beforehand registered into the medical institution file as a nearby medical institution of each base station, the nearby medical institution of the base station concerned is read, and it transmits to the Personal Digital Assistant concerned or the base station concerned. When the request code assigned to "travel pertinent information" and "weather information" is contained in the

information service request, The Personal Digital Assistant concerned is provided with the information which collected the pinpoint weather information around the base station concerned from weather information providing facilities, such as the Meteorological Agency, for example via the base station concerned or the base station concerned. When "next point" is specified in a Personal Digital Assistant or a base station, Based on walk histories currently recorded on the distance data between base stations and the card which are registered into the nonvolatile memory 31a of the information processor C, etc., such as walking distance before it of the pedestrian concerned, and the time required, The operation part 30b of the control section 30 computes the walking distance and the time required to the following point, and provides reply information. When "guidance derivation" is specified in a Personal Digital Assistant or a base station, the course guidance and derivation to a point or a target place which adjoin it from the base station concerned are performed. In this case, when obstacles, such as falling stone, flood, and a mudflow, occur in the middle of that course, that report, evasion advice, etc. can also be added to reply information.

[0069] Embodiment] besides [The measurement value of the pedometer 12a and the time signal of the clock 12e are used for Personal Digital Assistant A, Whenever it calculates the consumed calorie from a travel start point in time to the present with a predetermined computing equation, for example, reaches each point, it may be made to display the calculation result on the display screen of the outputting part 14 in a number or a graph. Whenever it acquires the data for health checks, when recording the data on a card serially, processing and processing of data can perform a still higher-precision healthy judging using the serial data. In each point values, such as the number of steps during a point, walking distance, walk time, the total walking distance, and the total walk time, can be displayed by contrast, and transition of fatigue and health condition etc. can also be seen. Since a pedestrian only approaches each base station (point) to the range which can read a card and identification information, walking distance, walk time, etc. are transmitted to an information processor, the total walking distance, the total walk time, etc. can also be acquired by the ability to integrate by the support center side. Such a function is significant in rally conventions, such as a walking, a hike, and cycling. If the Personal Digital Assistant concerned or base station is connected with from a support center and a situation allows when a SOS signal is sent, It points so that the pedestrian's index in the living body may be measured and the data for health checks may be transmitted, and the advice in the healthy decision result to this and the case of being required can also be provided. In the above-mentioned composition, it is also possible to include sightseeing information, public institution information, accommodations information, traffic information, etc. in [ other than what was mentioned above ] the group of travel pertinent information as a request item which can be demanded from Personal Digital Assistant A and the base station B.

[0070]

[Effect of the Invention] As mentioned above, according to the invention of claim 1,

pedestrians acquire data required for a health check with the possessed Personal Digital Assistant, and transmit to a support center. In response to the healthy decision result and the required advice based on the data for health checks, it can check with the Personal Digital Assistant from the support center. Therefore, since maintenance, management, and the required measure of health can be promptly taken in response to an exact health check at any time during a travel at a required place, a walking, a hike, a jogging, etc. can be performed positively, without having healthy anxiety.

[0071]In [ according to the invention of claim 2, record the data for health checks on a recording medium with a Personal Digital Assistant at the arbitrary places under travel, and ] a predetermined base station, The recorded data can be read, and it can transmit to a support center, and can check in the base station in response to the healthy decision result and the required advice based on the data for health checks from the support center. Therefore, in response to a health check exact whenever it arrives at a base station, maintenance, management, and the required measure of health can be promptly taken during a travel. Since a recording medium is used, it is possible to record a user's characteristic data a health indicator and other [ many of ], and to receive a higher-precision healthy judging. If only a recording medium is held, even if a rental Personal Digital Assistant is used and it does not possess a Personal Digital Assistant, a pedestrian support system can be used in a base station.

[0072]Since serial change of the data for health checks is known well according to the invention of claim 3, an institutional high healthy judging can be performed to the origin of right recognition of transition of health condition.

[0073]According to the invention of claim 4, little useless right healthy judging can be performed based on little capable change data, and it is effective in reduction of a user's use cost, the clause-of-time abbreviation of a support center, etc.

[0074]According to the invention of claim 5, it carries during a travel, and the data for health checks can be acquired, a health check demand can be transmitted to a support center, without choosing the time and a place, and the reply information over this can be received.

[0075]If installed in the position which can be received from a pedestrian's Personal Digital Assistant according to the invention of claim 6, or the position which a pedestrian can approach, The data for health checks is received from the Personal Digital Assistant, or it can be inputted from a predetermined recording medium, this can be transmitted to a support center, and it can transmit to the Personal Digital Assistant in response to the reply information over this, or can output to a base station. Therefore, pedestrians can receive a health check promptly correctly also in any of the position which is distant from a base station, and a base station.

[0076]According to the invention of claim 7, based on the data for health checks received from the base station, a healthy judging can be carried out in a support center, and the decision result and required advice can be transmitted to the base station.

[0077]According to the invention of claim 8, a health check exact whenever receiving an exact health check at any time at a required place using a Personal Digital Assistant also arrives at a base station can also be received during a travel.

[0078]When state of emergency occurs during a travel according to the invention of claim 9, Since the emergency dial signal and position information can be transmitted to an information processor from the Personal Digital Assistant concerned by operating a means to output the emergency dial signal of a Personal Digital Assistant, in a support center, the state of emergency can be coped with promptly.

[0079]When state of emergency occurs during a travel according to the invention of claim 10, When a means to output the emergency dial signal formed in the base station is operated, from the base station concerned, it is transmitted to an information processor by the emergency dial signal, and with the information processor of a support center. Since the information of the nearby medical institution of the address of the base station concerned is retrieved and the search results are transmitted to said base station, required action of asking a nearby medical institution from a base station can be taken promptly.

---

[Translation done.]

\* NOTICES \*

**JO and INPIT are not responsible for any  
damages caused by the use of this translation.**

1. This document has been translated by computer. So the translation may not reflect the original precisely.
2. \*\*\*\* shows the word which can not be translated.
3. In the drawings, any words are not translated.

---

## DESCRIPTION OF DRAWINGS

---

[Brief Description of the Drawings]

[Drawing 1] The key map showing two examples of the arrangement pattern with the whole construction of the pedestrian support system for using this invention method.

[Drawing 2] The key map showing the directions for use from which a recording medium differs according to a Personal Digital Assistant, a base station, and physical relationship.

[Drawing 3] The block diagram showing the composition of a Personal Digital Assistant roughly.

[Drawing 4] The flow chart explaining an operation of a Personal Digital Assistant

[Drawing 5] The mimetic diagram showing an example of the display information of a Personal Digital Assistant

[Drawing 6] The block diagram showing the composition of a base station roughly.

[Drawing 7] The flow chart explaining an operation of a base station.

[Drawing 8] The block diagram showing the composition of an information processor roughly.

[Drawing 9] The flow chart explaining an operation of an information processor.

[Description of Notations]

P Pedestrian etc.

A Personal Digital Assistant

B Base station

B1-B3 Base station

C Information processor

---

[Translation done.]